Chapter 21

Collective Stewardship Towards Life Economies

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Abstract This chapter explores how different actors, who drive an urgently needed economic systems change, can become part of a more coherent transformation system by focusing on a unifying future narrative: creating economies in service to life. The understanding of what gives life to systems is an overarching guiding force of the manifold transformative efforts that already exist. Based on an extensive literature review of new economic approaches, the chapter introduces a combination of guiding principles for new economies that would safeguard planetary and human integrity, while allowing for different interpretations and manifestations. It shows that for most principles, implementation strategies already exist. However, the so urgent systems transformations require combined efforts and an approach of collective stewardship by multiple actors, across societal sectors, cultures and institutions. The chapter elaborates how the adoption of a systems aliveness approach informs collective stewardship. The conscious choice of a constellation of strategic drivers, if applied together, increases the leverage of transformative efforts. The chapter concludes with deliberations on how to use the guiding principles and strategic drivers as an entry point for creating pathways towards regenerative civilizations, in which planetary life-support systems are as much valued as the dignity of people.

Keywords Life economy · Systems transformation · Planetary boundaries · Hothouse Earth · Economies in service to life · Systems aliveness · Transformation systems · Collective stewardship · Transformation literacy · Regeneration · Circularity

21.1 Introduction: A New Economic Perspective

The many symptoms of global sustainability challenges such as biodiversity loss, rising inequalities, or the climate crisis are today widely acknowledged as symptoms of humanly induced self-destructive economic behaviour. Not surprisingly, the

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number of voices that call for a change not only in the political realm, but also in the global economic system is increasing. It is time to fundamentally shift the purpose of economic action towards delivering wellbeing on a healthy planet. There is a rising realization that the current system consumes both human and natural resources in a way that, despite slowly improving global living standards, it deteriorates the planetary life-support system and causes more and more inequalities (Mazzucato, 2021). All historic forms of running economies such as capitalism, communism, socialism, or colonialism have had advantages for some and major disadvantages for many others. All manifestations of economics so far had destructive elements, because the link between economic systems, human wellbeing, and ecological impact remained unquestioned, ignored, or at least insufficiently considered. Our dominating global perspective is an economic template that is falling short of addressing the climate crisis, ecosystem destruction, and, more recently, a fair approach to overcoming the COVID-19 global pandemic. Not only does it fail to provide solutions to challenges like the 17 Sustainable Development Goals, the increasing global inequality and social fragmentation, but it actively contributes to accelerating the dangerous status quo. The growth focus of the current economic framework at the expense of nature's integrity and social cohesion is based on centuries of natural and human resource exploitation, culminating in the broad global dissemination of the neoliberal narrative and subsequently the supporting institutions (Lovins et al., 2018). The overarching story of today's outdated economic framework is simple, but powerfully ingrained in all global systems: its narrative suggests that the sole goal of the economy and of businesses is to generate financial wealth; that the freedom of the individual (person or corporation) is the primary societal value; that government should be small, protecting individuals and their private property; and that markets need to be free and unrestricted and will self-organize for the benefit of all (ibid.). This narrative assumes that resources to generate economic activities are unrestricted. Planetary limits, the existence of carefully balanced geo-bio-physical life-support systems, are absent in this narrative. Evenly absent is the idea of commons that all people (and other living beings) need to have access to. Governments that guide or steer markets for the sake of the common good are seen as the problem; the doctrine of free markets with constant economic growth was enshrined as governments' main goal. The global COVID-19 pandemic made the flaws of the current system transparent and reframed at least the role of the public sector as a guardian of people's overall health. The pandemic raised additional questions, including how we as humans will live in greater harmony with nature in the near future. Hence, it is time to think about sustainable forms of economies that combine the positive elements of various approaches and are appropriate to the challenges of our time.

This chapter explores how different actors, who drive an urgently needed economic systems change, can become part of a more coherent transformation system by focusing on a unifying future narrative: creating economies in service to life. The understanding of what gives life to systems is an overarching guiding force of the manifold transformative efforts that already exist. Based on an extensive literature review of new economic approaches, the chapter introduces a combination of guiding principles for new economies that would safeguard planetary and human integrity,

while allowing for different interpretations and manifestations. It shows that for most principles, implementation strategies already exist. However, the so urgent systems transformations require combined efforts and an approach of collective stewardship by multiple actors, across societal sectors, cultures, and institutions. The chapter elaborates how the adoption of a systems aliveness approach informs collective stewardship. The conscious choice of a constellation of strategic drivers, if applied together, increase the leverage of transformative efforts. The chapter concludes with deliberations on how to use the guiding principles and strategic drivers as an entry point for creating pathways towards regenerative civilizations, in which planetary life-support systems are as much valued as the dignity of people.

21.2 Life Economies

The future needs a global economic architecture that focuses on the conditions for life on our planet and the vitality or aliveness of all living beings, including human beings. This means, first of all, that we must understand the basic principles of such architecture: economies must be life-serving. Individual and collective wellbeing must be thought of together, as must be the interplay between people and nature. The core task for the future, then, is to recognize the conditions for interwoven social, economic, and ecological patterns and to continually and collaboratively ensure that these patterns enhance the vitality of local and global systems (Kuenkel, 2019; Kuenkel & Waddock, 2019).

There are many attempts to define principles, properties, or criteria that should guide a new economic system: they intend to not only halt the current negative path dependencies, but redirect the goal of economic activities away from what is perceived as an outdated growth paradigm towards a contribution to *life*. Quite a few authors have entered this new territory in thinking. There are blueprints for approaches to new forms of economies that not only address the fundamental role of humans in the Anthropocene as responsible actors within the framework of planetary boundaries (Cornell, 2012; Rockström et al., 2009), but also make concrete proposals for their implementation. These include the Economy of Common Good (Felber, 2018), an Economy in Service to Life (Lovins et al., 2018), the Mindful Economy (Magnuson, 2007), the Sufficiency Economy (Bergsteiner & Dharmapiya, 2016), the Caring Economy (Folbre, 1995), the Wellbeing Economy (Fioramonti, 2017), the Feminist Economy (Jacobsen, 2020), the Circular Economy (Ellen MacArthur Foundation, 2013), the Doughnut Economy (Raworth, 2018), Economics of Arrival (Trebeck & Williams, 2019), Mission Economy (Mazzucato, 2021), among many others.

What runs through all of these different approaches for a new economy are themes that focus on social and ecological vitality: *first*, a future economy must include nature in its balance sheets, incorporate boundary values of economic activity more clearly, and include ecosystem services. *Second*, a new economy must aim at the fair distribution of resources, income, and prosperity, and *third*, it must be linked

to forms of political participation in such a way that economic development can be negotiated and shaped in terms of individual and collective vitality. However, it is important to recognize that as much as there is agreement about the necessity of a fundamental shift, the future may require a plurality in approaches. A new economic architecture needs to leave space for different implementation options, which all follow the principle of enabling and maintaining vital systems of life and which are all based on the basic idea that humankind and nature are inextricably linked. The term ‘life economy’ reflects most appropriately what the future can look like. Economies which are in service to *life* operate in accordance with the needs of the planetary life-support system, respectively the planetary boundaries. They would be guided by multiple frameworks that safeguard the commons and balance the wellbeing of individuals and the wellbeing of the collective. Hence, the understanding what gives *life* to systems is part of the foundation of a new economic architecture. The skills to implement it are either already available or can be learned. If—as many scientists and sages predict—we need to rise up to our capacity for a *collective stewardship* approach to stabilize the trajectories of our planet including our societies, we need to become more humble partners of life’s potential to renew and replenish. Strategic transformations need to change the grammar of how we observe reality. We need to practice a system’s view of life, when we define what is needed for a shift of our dominant economic and social paradigms.

21.3 Building Transformation Systems

Sustainability challenges are nested in the complex adaptive systems that constitute human socio-economic–ecological developments (Otto et al., 2020). A global pandemic, caused by an invisible virus, has taught us what it means to live in an interconnected world, in which the ability of one society to gain resilience is inextricably linked with the existence or lack of the same capacity in another society. This is more than a lesson in global health issue. It invites us to realize that understanding our world from a systemic perspective is central to conceptualizing transformative change. The need for a novel and integrated approach becomes even more apparent when we look at the patchwork of transformative efforts that are already happening in the world. The actors that have probably the most serious track record of caring for all forms of life on our planet are civil society organizations. Wikipedia lists more than 40,000 internationally operating social or environmental NGOs (and vastly more exist at national and local levels). Yet, their task is often to repair damages and alleviate unjust or ecologically threatening economic impact to keep the planet and our social systems from collapse. In addition, many regenerative communities have formed to steward bottom-up local economic changes on all continents. They live the future on a small scale, but have limited influence. Social movements gather increasing numbers of young and old people who take to the streets to alert politicians and corporations of the climate crisis and its links to the economic system. They are utterly underfinanced, but forceful and impactful in press and social media and have

an undeniable influence on mindset shifts. Science and academia have been oblivious to naming the multiple effects of the current economic system for a long time, but more and more publicly funded research is going into environmental and social issues including research on economic transition and transformations. This is good news with promising results, but the competition is fierce and many research institutions have become captives of the neoliberal narrative in content and operations. Public sector and multilateral institutions gradually show increasing commitments to climate goals (with still many exceptions), but only few dare questioning the economic system or even openly drive economic systems change.¹ Radical shifts can hardly be expected from governments, who want to be re-elected; hence, the regulatory improvement of guidance for economies is only slowly implemented with lots of fall backs and lack of courage. But even the private sector which is to be expected to thrive on the current under-regulated world market has awakened to the possibility that exploiting people, avoiding tax, and damaging planetary life-support systems may fire back sooner rather than later. Since the financial crisis in 2008, increasing efforts to define and live corporate responsibility have emerged from medium-scale enterprises to global corporations—without fundamental shifts in how businesses operate. Some do green washing, many have good intentions, and some start industry-wide collaborations or get into multi-stakeholder partnerships with civil society organizations or the public sector to address sustainability challenges.² But all are captive to the global economic dynamics and the finance system. Many corporations have realized the conundrum and added foundations to their portfolio which pursue similar goals as many civil society organizations. How this patchwork is knitted together is rarely attended to, because it is so overwhelmingly complex. Gradually, global networks have emerged which connect different societal and global actors within and outside institutions and act as interlinkage for economic system change (see also Chap. 20). Less than an ideological battle of the perfect future economic systems, these collaboratives of actors around the globe may not always agree on the pathways to take, but if they stay connected and in respect of each other, they can iteratively approximate systems that improve wellbeing on a healthy planet. The fixation on one particular solution, one future economic model, one prescribed set of metrics, or a circumscribed target is less important than the acknowledgement of various transformative approaches, laboratories, and temporary solutions that follow underlying principles of life-enhancing economic activities.

Collectively stewarding economic systems change means that many cross-institutional, cross-sector, and cross-national stakeholders in multiple interconnected systems and subsystems contribute to the puzzle in a much more conscious way. Figure 21.1 shows an exemplary overview of a transformation system of actors that all contribute to the broad goal of wellbeing of people on a healthy planet. While the pathways to implementation may differ, the broad direction is clear: creating

¹ Positive Examples: Wellbeing Economy Government Alliance members: Scotland, Wales, Iceland, Finland and Scotland, while Canada and Costa Rica are at least supportive of the approach. Source: <https://wellbeingeconomy.org/wego>; accessed 14 June 2021.

² Example are global responsible value chain initiatives such as in: cocoa, textiles, or coffee.

Fig. 21.1 Transformation system towards life economies (copyright by the author)

life economies will require a fundamental shift in the global operating system. The change will be *radical*, because only a new North Star for new economics will engender the necessary behavioural changes. At the same time, the change will be *incremental* in the sense that transformative actions and steady small adjustments will gradually modify how societies, including the global society, operate in economic activities (Göpel 2016). The systems thinker and architect Christopher Alexander (2005) captured this when he said:

There is no ‘revolutionary’ approach that has much hope. The present system cannot be destroyed and replaced: it is too widely present, and too deeply embedded, in too many institutions. And it is, besides, for all its faults, serving us too well, in too many areas of life, for us to want to destroy and replace it. [...] The practical means we seek must be gradual, incremental modes of change, which somehow manage to inject living sequences—and morphogenetic ones—into the present system of processes (p. 532). [...] We begin to envisage a world in which every process, rule, human interaction, purpose-filled act, and anything which touches the environment engages with the major task of creating coherent living form. This needs to be understood by everyone: administrators, inventors, actors, users, builders, children (p. 547).

21.4 Guiding Principles for Life Economies

Understanding what gives life to systems, learning what a coherent living form can be in a particular context, will become a guiding force for strategizing the economic systems change we so deeply need (Kuenkel, 2019; Kuenkel & Waddock, 2019). If *systems aliveness* is the capability of small and larger systems to gain resilience, and regenerate and maintain their vitality in mutual consistency with other systems, the economy as a major force of human ecological interaction must be guided by

the overarching goal of life enhancement. **The overall purpose of economies in service of life is to operate in accordance with the needs of planetary life-support systems. They serve the wellbeing of people and are guided by frameworks that balance the wellbeing of the individual and the collective.**

Economies are patterns of behaviour in a fractal nature and so are attempts to transform the economic system. They also are fractals of the envisaged future pattern of relational economic interaction (Fath et al., 2019). This constitutes a challenge: guiding principles for future economies need to be general enough to not prescribe certain solutions, yet comprehensible and concrete enough to help guide the fundamental shift necessary. The term *principle* is here understood as fundamental propositions that govern a system's behaviour. *Guiding principles* inform and inspire, but do not prescribe thought and action. They can have numerous applications, manifest in many different ways, and need to be translated into narratives and pathways.³ As mentioned above, many authors have described aspects of how economies of the future need to function in order to safeguard ecological and human life-support systems. They suggest principles, properties, or criteria, while each focusing on different aspects that, together, could make up a whole.⁴ Many of them can be related to the generic systems aliveness principles elaborated in Part 1 Chap. 7. The *guiding principles* for *life economies*, therefore, draw on the descriptions by the mentioned authors, correspond with generic life principles,⁵ and are translated into a terminology that is accessible and understandable enough to guide action. In addition, the principles can be linked to pioneering practices already taking place, even though this may happen in niches of the mainstream economic system. This gives hope that the connected implementation of such principles will indeed shift the entire system rather sooner than later. Figure 21.2 shows the principles. Table 21.1 summarizes their features and gives examples of how they already manifest. The sections that follow explore the principles in more detail.

21.4.1 Regeneration and Circularity

The guiding principles of *regeneration and circularity* refer on the one hand to the ecological flow of resources and material. They need to be produced and consumed

³ The understanding of the term 'principles' is partly inspired by The Oxford Dictionary <https://en.oxforddictionaries.com/definition/principle>.

⁴ The list of literature reviewed include Fath et al. (2019), Parker and Ragnarsdottir (2021), Fullerton (2015), Raworth (2018): Wellbeing Economy Alliance: www.wellbeingeconomyalliance.org; Future Fit Foundation Guide (2019); Lovins et al. (2018); Mazzucato (2021), Jackson (2016), Jacobs (2002), Jørgensen et al. (2015), Leading4Wellbeing (2017).

⁵ The guiding principles match with the systems' aliveness principles described in Chap. 7 in the following way: *regeneration and circularity* belong to *generativity*; *localization and contextuality* belong to *containment*; *adaptability and innovation* belong to *novelty*; *transparency and accountability* belong to *consciousness*; *participation and distribution* belong to *interconnectedness*; *regulation and contribution* belong to *wholeness*.

Fig. 21.2 Guiding principles for life economies (copyright by the author)

so that either waste is turned into new products, the use of products has no waste, or consumed products are biodegradable. Nature, indeed, must be the guide for production and consumption in its regenerative capacity and circularity, but also in the limitation of usage, reusage, and maintenance. On the other hand, these guiding principles refer to social systems: they need to be constructed in a way that social services, care work, arts, and culture as well as services to the society are not only recognized as important, but valued as indispensable elements of regeneration and mutual support that enhances the vitality and resilience of societies. There is a clear trend in new economic approaches, for example, to adopt both regenerative and circular practices, such as city-based or national Circular Economy roadmaps (SITRA, 2016; MacArthur Foundation 2013), to develop policies towards strategic support to regenerative agriculture or agroecology; or to restore and expand biodiversity and natural habitats. Only few such approaches integrate the second element of societal care, for example, Feminist Economy (Jacobsen, 2020) and Caring Economy (Folbre, 1995) as fundamental. Arts and culture, today, are still seen as an add-on—the crucial link between their culturally diverse societal regenerative effect and the economy is seldom highlighted and often exploited for business purposes only.

Table 21.1 Guiding principles, features and practices of life economies

Guiding principles	Selected existing practices
1. Regeneration and circularity Production and consumption cycles are socially embedded and have net-zero negative impact or regenerate life-support systems	Regenerative or organic agriculture, agroecology, solidarity agriculture, valuation of ecosystem services, regenerative and renewable energy systems, circularity of materials and biodegradable products; cradle-to cradle approaches; zero-waste approaches, nature conservation and ecosystem restoration; soil management, forest protection and reforestation;rewilding; allocating land portions for nature and national parks; nature-based solutions; land and resources entrusted, not owned; regenerative investments; circular cities; national circular economy roadmaps, responsible value chains; social entrepreneurship; care work and service to society highly valued; reproductive activities valued
2. Localization and contextuality Economic activities are contextually adapted and strengthen regional cycles	Locally embedded economic cycles; regional bio-economies; community-based economic entities; shared ownership (cooperatives); locally governed commons; healthy balance between small, medium and large economic entities; globally connected values, locally implemented; economic activities organized in networks; from ownership of goods to sharing products; inclusion of weaker and marginalized communities and people
3. Adaptability and innovation Learning mechanisms foster life-enhancing technological and social innovation	Thriving markets with healthy competition; regenerative product innovation; guided technological innovation serving principles 1 and 5; economic and resource efficiency; quality standards; valued social innovation; social entrepreneurship; impact investing; business purpose oriented towards value for societies and ecosystems
4. Transparency and Accountability Reporting mechanisms and metrics create awareness of and track systems' vitality	Reporting standards; product traceability; transparent tax systems; progress measurements that reflect contribution to society and ecosystems; wellbeing indicators; nature as part of balance sheet; internalization of social and environmental costs; business accountability for environmental and social impact; digitalization in service of transparency of economic activities; broad access to information

(continued)

Table 21.1 (continued)

Guiding principles	Selected existing practices
5. Participation and distribution Governance and distributive measures guide wellbeing for all and ensure gender and social equity	Broad access to education and political participation; wealth distribution measures; distributive tax systems; public participation in economically relevant strategies; use of digitalization for participation and tracking of ecosystems and social system's health; democratic control of economic development and strategies; participatory corporate governance models; social and racial equity as guide for economic activities; peer-to-peer learning mechanisms; affirmative action
6. Regulation and contribution Voluntary and obligatory agreements safeguard commons and contribute to the vitality of social and ecological life-support systems	Finance systems in service of society and nature; tax incentive systems that safeguard nature, commons, and social equity; regulations and laws that create level playing fields for business regarding human rights, workers' rights and rights of nature; guiding regulations towards improvement of wellbeing; obligatory contribution of economic entities to societal wellbeing and progress; fiscal policies that incentivize regenerative investments; laws governing businesses that include new purpose; sustainable public procurements guidance; taxing resources rather than workers/people

21.4.2 *Localization and Contextuality*

The guiding principles of *localization and contextuality* refer to a number of aspects that are crucially important for *life economies*. Firstly, they speak to the need to acknowledge the potential that lies in the vitality of local or regional economic cycles (including what is still today framed as the informal sector), because they not only thrive on cultural diversity, but also connect people in a network of mutually beneficial relationships. *Life economies* need to be locally embedded and adjusted to local needs. While globalization did not only have negative effects and massively contributed to an understanding of the world as a whole, future economies may need to dismantle some of the deteriorating effects such as lack of transparency in global value chains with exploitative working conditions, high waste production, high energy usage for logistics, and resource depletion. If *regeneration and circularity* apply, *localization and contextuality* are the logical consequences. Humankind has always traded across the world and will do so in future, but economies in service of life will require showing the true costs of resources and logistics, and calculate the internalization of costs into products. The challenge is to find the balance between regional economic cycles, regional specialization, and global connections. This suggests that these principles require a serious investigation into the currently so dominant power agglomeration of large multinational companies. The question,

if monopolization in economies is per se detrimental, is not a new one, and there will be no easy answer. However, both in the financial and in the commodity sector, a life-enhancing future will presumably only work with clear checks and balances that prevent excessive power concentrations.

21.4.3 *Adaptability and Innovation*

The guiding principles of *adaptability and innovation* refer to human inventiveness in future economies, the search for excellence, and the creativity of finding new solutions to difficulties arising. But there is more to these principles: they reveal aspects of economies that have been crucial in the past, are important today, and will be essential for the future. It is almost as if an aspect of the free market doctrine which is certainly a partial cause for the current sustainability challenges, and is worth keeping and nurturing: the commitment to quality and the role of competition to achieve it. Despite the current ignorance of markets towards environmental and social impacts, the saying that the market rewards mastery is valid. People must be trained or manipulated to fall prey to abundant cheap and low-quality products, but they always recognize good quality; they are generally open to explore new products and new ways of doing things. This means that the definition of quality needs to include at least the first and the second set of principles. The question is what, in future economies, will guide market freedom and inventiveness: it is the North Star arising from the question ‘is what we invent life-enhancing’? But it is not only life-enhancing *innovation* and learning from nature for product cycles that counts. *Adaptability* as a principle refers back to the way economies embed individual, collective, societal, and global learning mechanisms, because these determine the capability to adjust pathways.

21.4.4 *Transparency and Accountability*

The operating principles of *transparency and accountability* underscore the mentioned learning mechanisms. Measuring progress towards life-enhancing economic action is crucially important, and without the responsibility by economic actors, be they private, public, collectively owned, or civil society actors, to reveal their impact on social and environment issues, economies in service of life will not manifest. But a radical shift towards life-enhancing economic action requires more than not doing harm or compliance with minimal legal standards. The future will link the license to operate not only for business, but all forms of enterprises (such as public and not-for-profit) to their net positive impact on people and nature. Whether this means reinvestment of a certain portion of profits into regenerative activities, the legally anchored accountability of enterprises to social or societal development, or a fundamental questioning of the negative path dependencies of the entire profit logic

(Hinton, 2021). Transparency and accountability, coupled with the other principles, is a route to awareness, learning, and measuring of progress. These principles have a wide array of possibilities for manifestation. The recent years have seen a proliferation of reporting mechanisms for companies,⁶ environmental or social target setting and accountability procedures,⁷ and demands for the traceability of goods.⁸ The attempts to anchor these principles are well underway, but will only unfold their potential, if the other principles are also lived reality.

21.4.5 *Participation and Distribution*

The guiding principles of *participation and distribution* sound as if they belong to the political realm, not to economic activities as such. But this is an illusion. It is the framework for economic activities that counts; it guides action and informs behaviour. What history has shown manifold since industrialization is that unguided free markets do not solve social and environmental problems, they cause them (Mazzucato, 2021). They have historically contributed to advancing living conditions, if the state played a strong role in ensuring wealth distribution and redistributions. Particularly, the social market economies in, for example, Northern European countries gave evidence to the intrinsically linked connections between low rates of inequality, high democratic participation, environmental regulations, and redistributive tax systems (OECD 2013; O'Neill et al. 2018). However, these countries are experiencing rising inequality as a result of the introduction of neoliberal free market narratives. Strong states are indispensable for economies in service of life (Nair, 2018). Not necessarily only tax systems count, it is the good governance, the absence of corrupt economic activities, the support for small and medium-size enterprises or cooperatives, the advancement of community-owned enterprises, or technology guidance for regenerative and renewable production lines, or national strategies for circular economies, which set frameworks that are life-enhancing. However, *life economies* require even more engagement: they reach into forms of governance that ensure participation of communities and citizens in the development of those economic priorities that serve people and nature.

⁶ Most known is the Global Reporting Initiative. Accessed 3 June 2021: <https://www.globalreporting.org>.

⁷ Examples are the 'Science-based Target Network', the 'Capital's Coalition' accessed 3 June 2021: <https://capitalscoalition.org>; or the 'Future-fit Foundation' accessed 3 June 2021: <https://futurefitbusiness.org>.

⁸ Examples are the FairTrade Standards or the Forest Stewardship Council, which most paper and packaging companies have already adopted with its traceability requirements.

21.4.6 *Regulation and Contribution*

The guiding principles of *regulation and contribution* refer to the above-mentioned role of strong and well-governed states that underpin the operating system of economies in service of life. The relationship between Anthropocenic activities, increasing population pressure, safeguarding the commons, and prosperity balanced between individual and collective wellbeing requires regulatory approaches. They do not substitute, but complement the development of value systems around economies in service of life, the self-organization of economic activities with a renewed purpose to enhance life, as well as new forms of governance. Indeed, the manifestation of the principles in conjunction with each other reduces the need for regulatory approaches. Constitutions, laws, standards, and regulations are less important, if norms and values are anchored and the narrative of life enhancement is intrinsically linked to economic activities. This is why the linked principle is *contribution*: the economic guiding function of strong and democratically legitimized states is to ensure that economies do what their purpose is—to contribute to a quality of life that spans across humankind and includes all species. The core question of ‘how do we contribute to life’ is a constant orientation and reorientation. Yet, the strong guiding function of regulations to safeguard life needs to be acknowledged: only rights of nature, ecocide laws, human rights, and workers’ rights create a level playing field for businesses in which all would compete under the same premises. Fiscal policies that incentivize regenerative investments simply guide sensible behaviour. Tax systems that safeguard nature and distribute wealth strengthen societal resilience. Public funding for innovative future research into learning from nature for technologies or financial support for the restoration of ecosystems enhances the quality of life for all.

21.5 Scenario: The Energy Sector in a Life Economy

Models that inform future scenarios show that the current global sustainability challenges are interlinked (Steffen et al., 2018). Halting the emerging ‘Hothouse Earth’ (ibid.) trajectories therefore requires evenly complex and interlinked strategies. Today and in future, the energy sector is an essential part of the functioning of societies. Only the recent years have awakened not only activists and NGOs, but many politicians as well as company owners or shareholders, to the immensity and the urgency of the challenges to reduce carbon emissions, if not capture carbon. The climate crisis calls for net-zero emissions in a relatively short period of time. Ignored for a long time, this now moves into the centre of attention of many political actors (IAE 2021, Gielen et al., 2019). However, the transformation of the global energy sector is mainly perceived as a technological challenge which a mix between state interventions and markets can solve. Yet, *what would it mean to apply the guiding principles of life economies for the energy sector?*

The guiding principles of *regeneration and circularity* seem to be self-evident in the transformation towards renewable energy sources. However, the entire production cycles need to be looked at regarding circularity of materials. The natural resources that are required for the current technological status are far from this goal; particularly in the mobility sector, the resource requirements, if they remain unchanged, will continue the trajectory of resource depletion, landscape degradation, and human rights violations (Lee & Clark, 2018). This means that *innovation and adaptability*, more specifically public and private funding support for innovative technology development for the circularity of materials and for the increase in energy efficiency, will become a cornerstone of success. The last 20 years have shown that without strong guiding policy interventions and decisive decisions, transformations in the energy sector fall short of their potential or have even slowed down (Nair, 2018). Hence, *regulations* in the sense of clear targets that go far beyond the Paris agreement are crucially important. But regulations include more than goals: they require the translation of targets into regulatory administrative procedures at all levels of society and for all societal sectors. This will meet resistance, from market actors, politicians who want to be re-elected, and citizens who need to change behaviour. Hence, only a strong awakened wish of all actors, individually and institutionally, to make their *contribution* to a renewable, carbon-neutral future would pave the way. Stories about future possibilities are inspiring drivers for transformative change, but net-zero pathways are not inspiring—neither for people who either have no or unstable access to energy nor for those privileged who feel entitled to have stable energy access and assume this will not change, no matter how they act. Technologically solving the climate crisis without addressing power concentrations and unequal access to energy worldwide will inevitably lead to additional challenges. Three sets of guiding principles would address this, if they became part of the foundation for the transformations.

Firstly, transparency and accountability would mean that the information about the need for transformations is more clearly disseminated. Moreover, progress and the contribution of all actors towards net-zero pathways would be openly reported against set targets, and choices to contribute would be transparently available to all—including citizens.

Secondly, support for net-zero pathways would open up, if goals included massive changes in the way energy is distributed. Hence, as guiding principles, only *participation and distribution* would engender true transformations that would provide energy access for all across the world in privileged as well as marginalized areas (which would massively reduce their marginalization). Again, these principles would only work in conjunction with *regeneration and circularity*—hence, if what should work for privileged areas should also work for today's marginalized areas, the *circularity* principle becomes even more important. Here, *life economies* would require leapfrogging technologies. The future calls for decentralized energy production, funding support for reshaping ownership of energy systems, and publicly subsidizing innovative technologies for renewables that do not exploit natural resources.

Thirdly, the transformation would inevitably require *regionalization and contextuality*. Without weakening the importance of global agreements and global technology exchange, energy access for all requires finding adjusted versions of a renewable

energy production mix that meets the criteria of all other guiding principles. In most countries, energy is a monopolized sector with publicly or privately owned companies that have a strong interest to perpetuate their existence, power, and profits. For example, the route to decentralization and access for all through community-owned energy systems is, despite the fact that they may enormously contribute to community resilience and political stability, riddled with fierce obstacles. Even in countries, where decentralized renewable energy production is supported by government policies or subsidies, they tend to get integrated into the existing power structures of large companies. Access to renewable energy for all is confronted with a multi-faceted arrangement of structures that are hardly conducive for transformations. The conclusion is clear: creating a transformed energy sector with *all* guiding principles as guiding criteria would be exemplary for the new operating system of *life economies*.

Today, a true transformation of the energy sector is confronted with a multifaceted arrangement of structures that are hardly conducive for the wholeness of changes that need happening: yet, all elements of the mutually supportive guiding principles are already existing—in pioneering government regulations, community-owned energy plants and knowledge about circularity. How then to strategize transformations?

21.6 Stewarding Economic System Change

The guiding principles for economies in service of life show that attempts to establish such economies already exist, but need to be amplified and accelerated. Moreover, they need to be connected in intelligent ways and linked to the underlying new narrative of life enhancement. Whether climate change and the planetary emergency situations have taken us towards near collapse, or whether the patchwork of promising shifts will move us towards a positive tipping point of transformative change, cannot be answered at this point. What is undeniably clear is that power concentrations including economic power, without checks and balances, have a life-deteriorating effect and hence do not serve *life economies*. They undermine almost all of the above-mentioned principles. Refocusing economic narratives towards life enhancement suggests a fundamental reorientation towards addressing power imbalances. In addition, the potential for a different future may be growing right there at the edges of the current system, where the most marginalized people live. Truly focusing on *life* may reach actors of the global society for whom issues like climate change and planetary emergencies have no meaning, because they struggle with much more apparent problems.

The question arises, what accelerates the emerging shift towards developing *life economies*, and how could actors collaborate and strategize such transformative change, in different places in the world, locally as well as globally? How could the loosely connected actors become part of a larger transformation system? The essentially nonlinear, relational, and mutually supportive *system aliveness* principles that underpin the guiding principles of *life economies* need to also find their

way into the linear planning modalities required by today's institutions. Too few theories, approaches, tools, methodologies, and frameworks enable actors to look at the patterns of interaction between people, strategies, interventions, or metrics that underlie complex systemic challenges and to see how these patterns enhance the quality of aliveness in living systems (or diminish it) (Donges et al., 2017; Kuenkel, 2019). A fundamental insight from the leadership of change guides the way: successful change endeavours mirror the way the envisioned future should operate. In other words, every step in the *collective stewardship* of transformations is a laboratory for living the future. Hence, even though transforming the economic systems will be hard work, meet resistance, and inevitably face challenges and setbacks, the systems aliveness principles need to not only inform the way future economies are organized, but also give rise to strategy elements in economic systems change. This opens pathways to both radical and incremental transformations and bridges the gap between the old, more mechanistic, and linear thinking in current strategy development and the new nonlinear complex adaptive thinking that is emerging rapidly, on which the generic aliveness principles are built. In order to understand the relevance of a patterned approach to strategizing transformative change, it is important to look at drivers of transformations and how they can become pathways for systems change, if connected with each other. An analysis of research conversations with 50 interview partners internationally active in sustainability transformations across private sector, public sector, and civil society showed that what was seen as crucially important for systems change could be clustered around six strategic drivers of transformations and linked to the generic aliveness principles (Kuenkel, 2019). Connecting these drivers leads to complementary implementation of transformative efforts and to an increased impact that isolated activities would not have. Strategically used, these six drivers—*narratives, structures, innovation, metrics, governance, and regulations*—serve as patterned meta-structure to find the combination or rather constellation of strategic actions that move transformations forward. Behind these six drivers are six questions that guide strategic choices:

- **Narratives:** What is the story that underpins the transformative change?
- **Structures:** How do we organize collective stewardship of change?
- **Innovation:** How do we guide innovations towards regenerative futures?
- **Metrics:** How do we measure progress?
- **Governance:** How do we learn collectively and negotiate differences?
- **Regulations:** How do we safeguard social and ecological life-support systems?

These drivers inspire transformative change interventions around a certain issue, such as above example of energy transformation, or other issues such as transformation of food systems or biodiversity restoration; they can also inform strategic transformations in certain geographical areas across different issues. They serve as quality check and planning methodology for designing transformative change interventions. Most often, depending on the issue, one of the dimensions functions as an entry point for driving transformations. Figure 21.3 shows the strategic drivers in relation to the aliveness principles. This approach acknowledges current capacities and already existing pathways, while ensuring that strategic planning is not merely

Fig. 21.3 Strategic drivers of transformations (copyright by the author)

reinforcing the known approaches of the status quo, but contributing to a deeper transformation of our socio-economic value systems, institutions, and structures. The six strategic drivers are described in more detail below and illustrated with the above example: the stewardship of the transformation of the energy sector.

21.6.1 Strategic Driver 1: Enlivening Narratives

Narratives are stories that are told about how the world works and how people should act economically. They set norms and anchor values. It is clear that the deeply ingrained narratives of the neoliberal economic paradigm of individualism, competition, and the primacy of the market have caused distorted and unhealthy growth patterns. This accelerated the centuries-long emergence of sustainability challenges,

and it also endangers current transformative efforts, as long-standing global and local power structures and the structural path dependencies of our current economic system are severe barriers to change. But narratives are already beginning to change. There is the necessity to further strengthen new mental models, mindsets, and stories of how our planet works as an interconnected life-support system. Only narratives that reconcile the human presence with nature, the commons, and the dignity of all people will help create *life economies* (Akerlof & Shiller, 2010; Ostrom, 2009). This includes a new understanding of conditions for wellbeing, of the importance of social equity, and of the responsibility for future generations. Narratives need to offer future possibilities combining societal vitality with economic prospects. The key question for transformative change is how to embed them in systems, structures, and institutions at all levels and all sectors.

21.6.2 Strategic Driver 2: Enabling Structures

Structures influence both thinking and behaviour, and if they remain unchanged, reinforce the status quo. Political structures, institutional structures, and societal structures (including power structures) can prevent or enhance transformations. The role of *enabling structures* in transformations to *life economies* is therefore to amplify those human interaction systems (institutions, organizations, partnerships, procedures and networks, etc.) that are future-oriented in the sense of wellbeing on a healthy planet. These can, for example, manifest as redefined purposes and procedures within companies or organizations that are centred around life-enhancing action; it can be fundamentally changed ownership models of companies (worker owned and cooperatives) or creating an enabling environment for purpose-driven non-profit companies (Hinton, 2021; Kelly, 2012). But structures have manifold purposes in transformative change. The increasingly emerging global and local networks, despite their loose organizations, are incubators for new structures. Networks of actors across different sectors (societal sectors such as public sector, private sector, civil society) or industry sectors (such as all actors in a value chain, all companies in an industry sector, or different industries) model new economic approaches or at least ensure sustainable actions within the existing economic parameters. Moreover, meta-structures become increasingly important in transformative change: these can be stewarding entities as partnerships between different societal or global actors, or formalized bodies that complement existing structures in order to ensure certain aspects of transformations to *life economies*. Such entities can engender care for common resources such as citizen-owned renewable energy initiatives; collaborative management of water resources; or community-owned forests.

21.6.3 Strategic Driver 3: Life-Enhancing Innovation

Innovation is a key driver for shifting the economic system, particularly, as the focus on life opens up entirely new perspectives for technological and social innovations. For innovation to be conducive to the underlying purpose of life enhancement, strategic guidance is required. This is not about confining inventiveness, but setting the right parameters, and asking the question: how can technological, social, digital, and scientific innovation strengthen life-enhancing economic action? Moreover, when innovation turns into collective design and integrates collaboration and input from various stakeholders, it moves from isolated improvement or brilliant inventions into a service to humankind. As it was in the past, the role of public funding is crucially important (Mazzucato, 2021) here. It cannot prescribe inventions, but set the guiding frame through research support, incentives, and awards, and thus encourage private sector actors to do the same within their firms or industrial sectors. Offering innovation support is not about steering outcomes, but stewarding inventiveness towards a maximum degree of proactive creativity and self-organization while using a living systems perspective as a guardrail. Providing spaces for creative invention is as important as discovering emergent opportunities and nurturing emerging potential. Technical and social solutions that intend to strengthen *life economies* will inevitably turn into new challenges. This is why innovation needs to be contextualized, anchored in continual knowledge exchange, and integrate informal, indigenous, and traditional knowledge systems (Fazey et al., 2020).

21.6.4 Strategic Driver 4: Empowering Metrics

The current criteria for measuring progress do not reflect wellbeing on a healthy planet. At the heart of metrics is the question about what societies value (e.g. the growth paradigm), how much it gets valued (e.g. the balance between natural resources, societal care, and quarterly financial growth), and how human presence can live in harmony with nature. Metrics play a central role in creating awareness of future pathways, as well as the progress we make in reaching them, be that on a local or global level, because what gets measured gets improved. Metrics for future economies cannot escape the complexity of life: they need to integrate a variety of measurement approaches to change, as well as both quantitative and qualitative indicators in order to respond to the differences in what works for whom and for what purpose. This can range from policy development and national budget plans to business restructuration incentive, from cultural shifts in different fractals such as municipalities to global companies, from individual consumer behaviour to the culture of people and nature as ecosystem services. Metrics need to measure threats as well as progress towards wellbeing on a healthy planet (Costanza et al., 2014; Hezri & Dovers, 2006; Hoekstra, 2019; Rametsteiner et al., 2011). The transparency

they create encourages reporting and disclosure mechanism that complement pathways to economies in the service of life. It is important who measures what, how different metrics are balanced off against each other, and how these feed into the accountability of progress towards *life economies*. The key question to ask is how societal progress, economic results, and healthy ecological life-support systems can be measured in conjunction.

21.6.5 Strategic Driver 5: Multi-level Governance

The concept of governance is complementary to the role of governments. It refers to multiple ways of collectively stewarding societies, commons, or communities in collaboration with different stakeholders in order to solve problems that are of collective nature. The participation of various societal groups in policy development and decision-making is important for addressing complex societal or global challenges. For economics, the role of governance is rarely seen as relevant, except for recent approaches to the governance of global value chains (Gereffi et al., 2005) or multi-level governance of certain economic sectors (Mayntz, 2007) or regions (Loorbach et al., 2016). However, the role of multi-level (multi-issue and multi-stakeholder) governance in *life economies* would be to ensure inclusion, power distribution, acknowledgement of diversity, collective learning, and a continuous discourse on the purpose of economic action. Historically, governance mechanisms have always existed as a pathway to human wellbeing, as checks and balances for ruling powers, and as a way to arrive at solutions in a negotiated balance between the interests of the individual and the interests of the whole. In recent years, multiple networked forms of governance have emerged around attempts to better manage the global commons—from global networks and alliances to local communities. Governance mechanisms create linkages between multiple actors and multiple scales while integrating differences in perspective, expertise, power, and experiences. The key question to ask is how to co-construct participatory stewarding mechanisms that ensure the life-supporting impact of economic and social activities?

21.6.6 Strategic Driver 6: Guiding Regulations

Safeguarding the commons for human and planetary health is crucial for our future. The role of guiding regulations as well as resource allocations (e.g. wellbeing budgets, taxing resource usage, regenerative investments) is to safeguard life's integrity at all levels, for people and planet (Boin et al., 2021; Bollier & Helfrich, 2012; Mazzucato, 2021). The adverse impact of humankind on the bio- and geosphere needs to be limited and managed through binding laws and voluntary agreements which come with provisions for sanctions. Laws, regulations, tax incentives, and deliberate resource allocation for the redistribution of wealth are interventions that accelerate

behavioural change. Economic transformations require government decision to guide economic actions and create a level playing field for the private sector and citizens to act in a future-oriented way. But also, voluntary agreements play an important role, if they involve for example voluntary standards for private sector actors, such as agreed-upon value chain sustainability, sourcing principles, or ecologically friendly production. Advocacy organizations play an essential role in preparing the ground for regulatory frameworks. But both binding regulations and voluntary standards only create an effect, when they are anchored in political and institutional structures. This is evident in how international conventions such as the Paris Agreement or the biodiversity convention get translated into administrative procedures; how establishing ecocide as a crime against humanity could create a new level playing field for companies; or how redistributive policy strategies such as Universal Basic Income would change societal structures. In addition, *life economies* require a new definition of what global and societal commons are and how to safeguard and maintain them. Societal actors need to show their accountability to the vitality of systems that affect not only the individual, but all. This refers to global commons such as air quality or climate stability, but it can also refer to commons, which today are partly privatized, such as water or land. Even health, as the COVID-19 pandemic has shown, is not just an individual phenomenon, but a collective one. The question that will inevitably have both global and locally contextualized answers is which regulatory frameworks, voluntary standards, and guided resource allocations safeguard social and environmental life-support systems.

21.7 Scenario: Stewarding Transformations in the Energy Sector

The composition of strategic drivers for energy transformations must be different depending on the context, the existing technological advancement or lack thereof, and the infrastructure for energy systems. It will necessarily also be different depending on the role of the state, its strength to achieve radical transformative decisions, its degree of good governance, and the entrustment by citizens to take the lead in transforming the energy sector. Last but not least, it will depend on the capability of private sector actors to co-drive implementation together with public sector and on the capability and willingness of energy monopolies to dismantle or change their business model. But across all the different contexts, the six drivers are crucially important in their togetherness. While the role of strong states is indispensable in the transformation of the global energy sector and a political commitment to carbon-neutrality a prerequisite, none of the drivers can be neglected, even though the entry points may be different. In technological advanced countries with strong states, *guiding regulations* following carbon-neutrality goals will surely be the strategic entry points, but they need to be complemented by support for *life-enhancing innovation* and *enlivening*

narratives that inspire all societal actors to contribute. This only works for citizens, if there are changes in power structures on the horizon; hence, the support for community-owned, decentralized, and contextualized energy production as part of a strategy of *enabling structures* is a cornerstone of success. This inevitably includes *multi-level governance* of energy production systems, embedded in national policies. If this aspect is neglected, it will slow down the transition (Braunreiter et al., 2021). Any transformation strategy needs to be underpinned by developing *empowering metrics* that go beyond the overall goal of carbon-neutrality, but help all actors see in their own areas how they can track progress. In a technologically less advanced country or one with a weak state, the entry point will certainly be different. Supported decentralized self-organization of locally adapted energy production (*life-enhancing innovation*) combined with *enlivening narratives* of economic potential as a result of access to energy will more likely be the entry points.

21.8 Conclusions

The basic commonalities of new economic approaches are remarkable, even if differently described and illustrated with different principles. However, the protagonists hardly refer to each other and many concepts are disseminated in competition with each other. This raises the question of why the much-needed restructuring of a globally destructive economic system is not being pursued more jointly. It is important to recognize that individual actors alone are not capable of overcoming the complex challenges. Working together rather than in competition, even while respecting the diversity of individual approaches, would make the drivers for radical transformation towards a new economic architecture more effective. It is becoming apparent that a connection between future thinkers and practitioners, between climate activists and economists, requires an innovative form of *collective stewardship* in cross-institutional network that advance transformations in practice. The guiding principles for *life economies* which have been described above may not be entirely new and to a certain extent simply an advancement of many already existing transformative initiatives. However, this is the crucial aspect—the elements of the patchwork already exist, but they need to be knitted together in a new and more conscious way. The guiding principles require implementation *together*. The strategic drivers help actors to engender these principles—step by step, issue by issue, region by region. As mutually supportive aspects of an overall strategy, they inspire the design of exactly these collaborative strategies by different actors that need to work together more deliberately in a transformation system. They do not prescribe specific actions, but guide actors to adopt and connect measures and actions that, in the end, connect the many small steps towards establishing *life economies*. This increases the likelihood of real change happening. Fath et al. (2019) summarize both the challenges and the potential:

‘Human learning too is never done. Despite humanity’s adaptive talents, every pattern of civilization eventually reaches limits that force a choice: cling to old ways and decline or innovate and transform. Today’s most crucial innovation may well involve learning to live and flourish within the limits [64]’.

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